# Machine Mosaic User Guide

## Startup

STEP 1. ensure you are connected to "bricklaying network" (pw: csaildrl) and that the unitree G1 is on. This is a subnet of "statacenter", so you will still have internet connection

STEP 2. ssh with `$ssh unitree@192.168.123.165`

Troubleshooting:
if it has difficulty with "connecting to host", try it a couple more times, waiting to ensure the G1 is fully booted up. if the G1 has been running for a while and you still can't connect, it is probably that the G1 has crashed or booted improperly --- restart the G1 by power cycling via the power button on the battery

Ignore the ros prompt and any errors... just type in any number to begin

OPTIONAL STEP 3. (optional: see ubuntu desktop) to activate vnc for desktop viewing, run `$x11vnc -forver -create`. You can then connect to the desktop with remmina or any other vnc client --- type in 192.168.123.165 on your vnc client

once you have connected to vnc, type `$startxfce4` in the terminal to start the xfce4 desktop manager

STEP 4. the repository is located in ~/drl/. Before running scripts, activate the conda environment with `$conda activate unitree`

TROUBLESHOOTING:

Terminal freezes / entire desktop freezes /ssh won't connect: the G1 is probably crashed. This happens every half-hour or so. We don't know why. Power cycling fixes the G1

"Can't find DEX3 hand controller": something similar occasionally pops up when running scripts. The hands did not connect properly upon boot. Power cycle as many times as it takes to resolve this issue. Spreading the fingers out before turning the unitree on improves probability of connecting properly